

No. 2024-1627, 2024-1628, 2024-1631, 2024-1632, 2024-1633, 2024-1634

United States Court of Appeals
For the Federal Circuit

WAG ACQUISITION, LLC

Appellant,

v.

THE WALT DISNEY COMPANY, DISNEY STREAMING SERVICES, LLC,
HULU, LLC, NETFLIX, INC., GOOGLE LLC, AMAZON.COM, INC.,
AMAZON WEB SERVICES, INC., AMAZON.COM SERVICES LLC

Appellees.

Appeals from the United States Patent and Trademark Office, Patent Trial
and Appeal Board in Nos. IPR2022-01227, IPR2022-01228,
IPR2022-1412, IPR2022-01413, IPR2022-01430, IPR2022-01433

**RESPONSE BRIEF OF APPELLEES AMAZON.COM, INC., AMAZON
WEB SERVICES, INC., AND AMAZON.COM SERVICES LLC**

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EXEMPLARY PATENT CLAIM AT ISSUE

U.S. Patent No. 9,742,824

Claim 1

[1.a] A method for distributing over the Internet, from a server system to one or more user systems, a pre-recorded audio or video program stored in digitally encoded form on computer-readable media, the method comprising:

[1.b] reading, by at least one computer of the server system, the pre-recorded audio or video program from the computer-readable media;

[1.c] supplying, at the server system, media data elements representing the program, each media data element comprising a digitally encoded portion of the program and having a playback rate;

[1.d] serially identifying the media data elements, said serial identification indicating a time sequence of the media data elements;

[1.e] storing the media data elements in a data structure under the control of the server system;

[1.f] receiving requests at the server system via one or more data connections over the Internet, for one or more of the media data elements stored in the data structure, each received request specifying one or more serial identifiers of the requested one or more media data elements, each received request originating from a requesting user system of the one or more user systems; and

[1.g] responsive to the requests, sending, by the server system, the one or more media data elements having the one or more specified serial identifiers, to the requesting user systems corresponding to the requests; wherein

[1.h] the data connection between the server system and each requesting user system has a data rate more rapid than the playback rate of the one or more media data elements sent via that connection;

[1.i] each sending is at a transmission rate as fast as the data connection between the server system and each requesting user system allow;

[1.j] the one or more media data element sent are selected without depending on the server system maintaining a record of the last media data element sent to the requesting user systems;

[1.k] all of the media data elements that are sent by the server system to the one or more user systems are sent in response to the requests; and

[1.l] all of the media data elements that are sent by the server system to the requesting user systems are sent from the data structure under the control of the server system as the media data elements were first stored therein.

CERTIFICATE OF INTEREST

For Appellees Amazon.com, Inc., Amazon Web Services, Inc., and Amazon.com Services LLC:

Counsel for Appellees Amazon.com, Inc., Amazon Web Services, Inc., and Amazon.com Services LLC certify the following under Federal Circuit Rule 47.4:

1. The full name of every party or amicus represented by me is:

Amazon.com, Inc., Amazon Web Services, Inc., and Amazon.com Services LLC

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

None.

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

Amazon.com, Inc. is the parent corporation of Amazon Web Services, Inc., and Amazon.com Services, Inc.

4. The names of all law firms and the partners or associates that appeared for the parties or amicus now represented by me in the trial court or agency or are expected to appear in this court (and who have not entered an appearance in this case) are:

None.

5. Other than the originating case number(s), the title and number of any case known to counsel to be pending in this or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal:

WAG Acquisition, L.L.C. v. Amazon.com, Inc., No. 2:22-cv-01424-JLR (W.D. Wash.)

WAG Acquisition, L.L.C. v. The Walt Disney Company, No. 2:21-cv-08230-JAK (C.D. Cal)

WAG Acquisition, L.L.C. v. Google LLC, No. 3:22-cv-05772-JD (N.D. Cal)

WAG Acquisition, L.L.C. v. Netflix, Inc., Case No. 3:22-cv-05003-JD (N.D. Cal.);

WAG Acquisition, L.L.C. v. Hulu LLC, Case No. 2:21-cv-08242-JAK-E (C.D. Cal.);

6. All information required by Federal Rule of Appellate Procedure 26.1(b) and (c) that identifies organizational victims in criminal cases and debtors and trustees in bankruptcy cases:

None.

November 4, 2024

FENWICK & WEST LLP

By: /s/ J. David Hadden

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Inc., and Amazon.com Services LLC*

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TABLE OF ABBREVIATIONS

'824 patent	U.S. Patent No. 9,752,824
'636 patent	U.S. Patent No. 9,762,636
Disney IPRs	IPR Nos. 2022-01227 & 2022-01228
Google IPRs	IPR Nos. 2022-01411 & 2022-01412
Amazon IPRs	IPR Nos. 2022-01430 & 2022-01433
The Board	Patent Trial and Appeal Board
challenged claims	'824 patent claims 1-12 & '636 patent claims 1-12
Amazon	Amazon.com, Inc., Amazon Web Services, Inc., and Amazon.com Services LLC, appellees in the 2024-1633 & 1634 matters
WAG	Appellant WAG Acquisition, LLC
Disney	The Walt Disney Company, Disney Streaming Services, LLC, Hulu, LLC, and Netflix, Inc, appellees in the 2024-1627, 2024-1628 matters ¹
Google	Google LLC, appellee in the 2024-1631, 2024-1632 matters
Carmel	U.S. Patent No. 6,389,473
Feig	U.S. Patent No. 6,175,862
Willebeek	M.H. Willebeek-LeMair et al., <i>Bamba—Audio and Video Streaming over the Internet</i> , IBM Journal of Research and Development, Vol. 42, No. 2, 269–80 (March 1998)
FWD	Final Written Decision
IPR	<i>Inter partes</i> review proceeding
OB	WAG's opening brief

¹ Netflix is only an appellee in the 2024-1628 appeal.

STATEMENT OF RELATED CASES

No other appeal in or from these IPR proceedings was previously before this or any other appellate court. The following pending cases or proceedings may directly affect or be directly affected by this Court's decision in this appeal:

- WAG Acquisition, L.L.C. v. Walt Disney Company et al., No. 2:21-cv-08230-JAK-E (C.D. Cal.)
- WAG Acquisition, L.L.C. v. Hulu LLC, No. 2:21-cv-08242-JAK-E (C.D. Cal.)
- WAG Acquisition, L.L.C. v. Netflix, Inc., No. 3:22-cv-05003-JD (N.D. Cal.)
- WAG Acquisition, L.L.C. v. Google LLC et al., No. 3:22-cv-05772-JD (N.D. Cal.)
- WAG Acquisition, L.L.C. v. Amazon.com, Inc. et al., No. 2:22-cv-1424-JLR (W.D. Wash.)

JURISDICTIONAL STATEMENT

Amazon agrees with WAG's statement of jurisdiction.

INTRODUCTION

Amazon’s appeal provides this Court with two straightforward paths to affirm all six consolidated appeals. First, the Board’s determination in the Amazon IPRs that the challenged claims would have been obvious in view of Carmel alone is supported by substantial evidence. WAG’s shotgun spray of arguments fails to show otherwise. Importantly, WAG’s claim construction arguments are entirely beside the point because the Board below interpreted the claims consistent with *WAG*’s proposed constructions. And most of WAG’s complaints of the Board’s treatment of Carmel are likewise not applicable to the theory Amazon presented below. That leaves WAG’s only relevant challenge: whether substantial evidence supports the Board’s determination that a skilled artisan would have understood that the most common way to implement Carmel’s relevant embodiment is using a “pull system”—one where the client makes repeated requests to the server for files. And WAG’s challenge to this deeply fact-intensive determination fails because Carmel plainly discloses using “HTTP” to transfer individual slice files in its relevant embodiment, and both Amazon’s and WAG’s experts agreed that the most common way to transfer individual files using HTTP at the relevant time was through a client making successive GET requests for files from the server. The Board’s unpatentability determination rested on this undisputed evidence, leaving WAG no ground to demonstrate that the Board erred.

Second, the Court can affirm because the Board’s determination that a skilled artisan would have been motivated to combine Carmel and Feig is also supported by substantial evidence. Critically, WAG does not contest the Board’s findings that the combination of references discloses each claim limitation. Rather, WAG challenges only whether Amazon provided—and the Board credited—a sufficient motivation to combine Carmel and Feig, which is a classic factual inquiry to which the Board is given great deference. And while the Board credited several motivations based on the references themselves and expert testimony, WAG challenges only one on appeal. But even ignoring that WAG waived any challenge to these alternative, viable grounds for the motivation to combine finding, WAG’s lone challenge fails because that motivation is supported by substantial evidence. Lastly, WAG argues that the Board ignored a change to Carmel’s mode of operation if combined with Feig. But this argument again depends on WAG’s failed argument that a skilled artisan would understand Carmel as disclosing only a push system, rather than a pull system where the client requests data from the server. Given that finding is supported by substantial evidence, WAG’s *only* (yet vestigial) challenge to the Carmel-Feig theory fails.

If the Court affirms the Amazon IPR FWDs, it need not address the unique issues raised by the Disney or Google IPR appeals, such as whether Carmel

inherently or expressly discloses limitation 1.k (Disney) or whether the Board’s broader reading of the challenged claims is correct (Google).

Lastly, WAG accuses the Board of being inconsistent in its repeated determinations that the challenged claims are unpatentable. OB3, 5-6, 12-13, 16. But the Board’s findings in each IPR simply reflect the differing arguments and evidence presented to the Board in each of the Amazon, Disney, and Google IPRs. Rather than reflecting “arbitrary and capricious agency action” as WAG contends, OB16, the Board’s invalidation of the challenged claims under multiple theories only bolsters the conclusion that these claims should have never issued.

STATEMENT OF ISSUES

Is the Board’s determination that a skilled artisan would have understood Carmel to render the challenged claims obvious supported by substantial evidence?

Does substantial evidence support the Board’s finding that a skilled artisan would have been motivated to combine Carmel and Feig?

STATEMENT OF THE CASE

A. The Challenged Patents

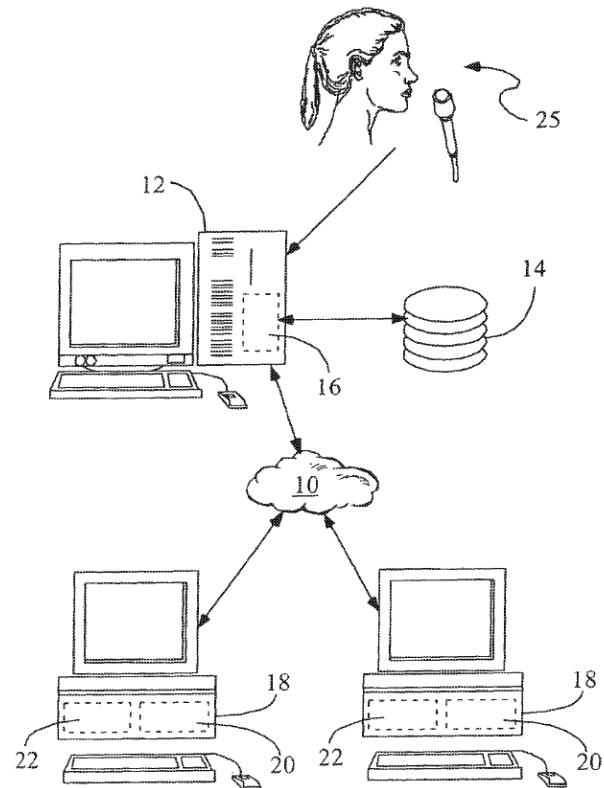
The ’824 and ’636 patents—both titled “Streaming Media Delivery System”—are related and share a common specification.² They relate to “multimedia computer communication systems” “and methods for delivering

² For ease of reference, Amazon will cite to the specification of the ’824 patent.

streaming media, such as audio and video, on the Internet.” Appx6826 (1:52-55).

Figure 1 of the ’824 patent, below, shows the system, including a server (12) connected via the Internet (10) for streaming media to at least one user computer (18) or similar device. Appx6828 (6:32-35, 6:48-51).

Fig. 1



Appx6823. Media provided to the server “may come from a live source, shown as 25 in FIG. 1, or from a stored file on the source server 12, or another storage device, such as a hard drive,” Appx6831 (11:20-23), in the form of multiple media data elements. Appx6827 (3:59-67).

The patents describe streaming media—in the form of the pre-recorded media data elements—stored on the server. Appx6827 (3:65-67). The server receives requests for the media data elements from a user system—i.e., a client—where the client requests specify the elements using serial identifiers. Appx6827 (3:67-4:5). The server sends the identified media data elements to the user system in response to the requests. *Id.* (4:2-12).

As of the challenged patents’ claimed priority date—September 12, 2000—the process of a client requesting data from a server was well-known and referred to as a “client-pull system.” Appx20528-20529 (¶¶38-39); Appx22032-22033 (¶19). A pull system contrasts with a “server-push” system, where the server controls the flow of data to the client. Appx22110 (¶42).³

The patents assert that “[t]here is a need for improved systems . . . which facilitate continuous transmission of streaming content, respond on demand without objectionable buffering delay, and perform without disruption or dropouts.” Appx6827 (3:45-50). And they purport to address these concerns through use of a “data connection between the server system and each requesting user system [having] a data rate more rapid than the playback rate” and by “sending [media data

³ While the patents themselves do not refer to “pull” or “push” systems, the titles of many of the references cited by the patents make clear both systems and their characteristics were well-known. See e.g., Appx6820 “J.P. Martin-Flatin; ‘Push vs. Pull in Web-Based Network Management’; 1999.”

elements] at a transmission rate as fast as the data connection between the server system and each requesting user system allow[s.]” Appx6833-6834 (16:64-17:3).

1. The challenged claims.

The '824 and '636 patents each contain twelve claims. Appx6833-6835; Appx1936-1938 (16:28-19:4). Amazon, Disney, and Google each challenged all twelve claims of both patents in their respective IPRs. Appx2; Appx126; Appx252; Appx316; Appx381; Appx493. The independent claims of both patents recite near identical subject matter, *compare e.g.*, Appx6833-6834 (16:36-17:15) *with* Appx1936-1937 (16:28-17:8), and, as WAG does here on appeal, the parties addressed them collectively below, OB8 n.5; Appx99; Appx225; Appx308; Appx373; Appx481; Appx591. WAG also presented no separate arguments for any dependent claim during the IPRs, Appx101-102; Appx227-228; Appx309-310; Appx374-375; Appx482-484; Appx593-594, and similarly presents no dependent-claim-specific arguments here.

Although the patent describes its improvement over the prior art in terms of the data transmission rate between the client and server, the IPRs focused—and WAG’s appeal focuses—largely on limitations reciting the known method of a client requesting data from the server, and in particular limitation 1.k (italicized below).

Claim 1 of the '824 patent is exemplary of each challenged claim, and recites:

[1.a] A method for distributing over the Internet, from a server system to one or more user systems, a pre-recorded audio or video program stored in digitally encoded form on computer-readable media, the method comprising:

[1.b] reading, by at least one computer of the server system, the pre-recorded audio or video program from the computer-readable media;

[1.c] supplying, at the server system, media data elements representing the program, each media data element comprising a digitally encoded portion of the program and having a playback rate;

[1.d] serially identifying the media data elements, said serial identification indicating a time sequence of the media data elements;

[1.e] storing the media data elements in a data structure under the control of the server system;

[1.f] receiving requests at the server system via one or more data connections over the Internet, for one or more of the media data elements stored in the data structure, each received request specifying one or more serial identifiers of the requested one or more media data elements, each received request originating from a requesting user system of the one or more user systems; and

[1.g] responsive to the requests, sending, by the server system, the one or more media data elements having the one or more specified serial identifiers, to the requesting user systems corresponding to the requests; wherein

[1.h] the data connection between the server system and each requesting user system has a data rate more rapid than the playback rate of the one or more media data elements sent via that connection;

[1.i] each sending is at a transmission rate as fast as the data connection between the server system and each requesting user system allow;

[1.j] the one or more media data element sent are selected without depending on the server system maintaining a record of the last media data element sent to the requesting user systems;

[1.k] all of the media data elements that are sent by the server system to the one or more user systems are sent in response to the requests; and

[1.l] all of the media data elements that are sent by the server system to the requesting user systems are sent from the data structure under the control of the server system as the media data elements were first stored therein.

Appx6833-6834 (16:36-17:15) (emphasis added).

While lengthy, the challenged claims essentially require (1) a server storing a media program comprised of serially identified media data elements and (2) sending media data elements to client computers based on client requests, and (3) sending those elements at a rate faster than the playback rate of the media requested. *Id.*

B. The Prior Art

Amazon's petitions asserted that the challenged claims are obvious in view of Carmel, Feig, and Willebeek. Appx19899. Within this ground, Amazon argued obviousness based on Carmel alone, and Carmel in combination with one or both of Feig and Willebeek. Only Carmel and Feig are relevant to this appeal.⁴

1. Carmel

Carmel discloses a method for streaming live or prerecorded media from a server to multiple client computers over the Internet. Appx9348 (2:1-21, 2:29-31); Appx9350 (6:24-27, 6:57-60). That media could include, "for example, an interview program or an entertainment or sports event." Appx9350 (6:58-59). Figure 2 of

⁴ Amazon relied on Willebeek only for its disclosure relevant to limitation 1.i. Appx445-446. But Amazon also argued that both Carmel and Feig disclose the limitation, and the Board found that all three references disclose it over no contrary argument from WAG. Appx444-446.

Carmel, below, illustrates a computer system (32) for broadcasting media through a network (28). Appx9350 (6:24-27).

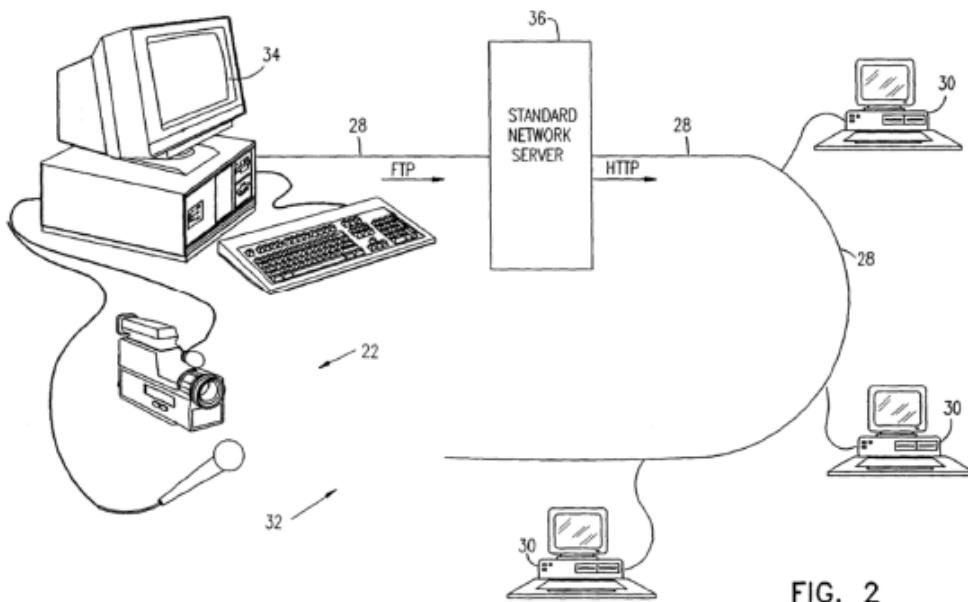


FIG. 2

Appx9338. As shown above, Carmel's system includes a transmitting computer (34) (which receives audiovisual input from devices 22), a plurality of client devices (30), and network server (36). Appx9350 (6:28-35).

Carmel discloses two separate embodiments. Appx9350 (5:46-48, 5:58-60, 6:3-10); Appx9351 (7:18-22, 8:42-44); Appx9352 (10:24-27, 10:64-67); Appx21730-21731 (42:25-43:19); Appx21733 (45:5-13); Appx22385-22386 (144:12-145:4); Appx22883-22884 (650:19-651:13). One transmits separate files of data at a single-quality level, and is represented by Figures 3A, 3B, 3C, and 6A in Carmel (and data stream 40)—Carmel's “separate-file” embodiment. Appx9348 (2:22-27); Appx9350 (5:46-48); Appx9351 (7:18-22); Appx9352 (10:24-27);

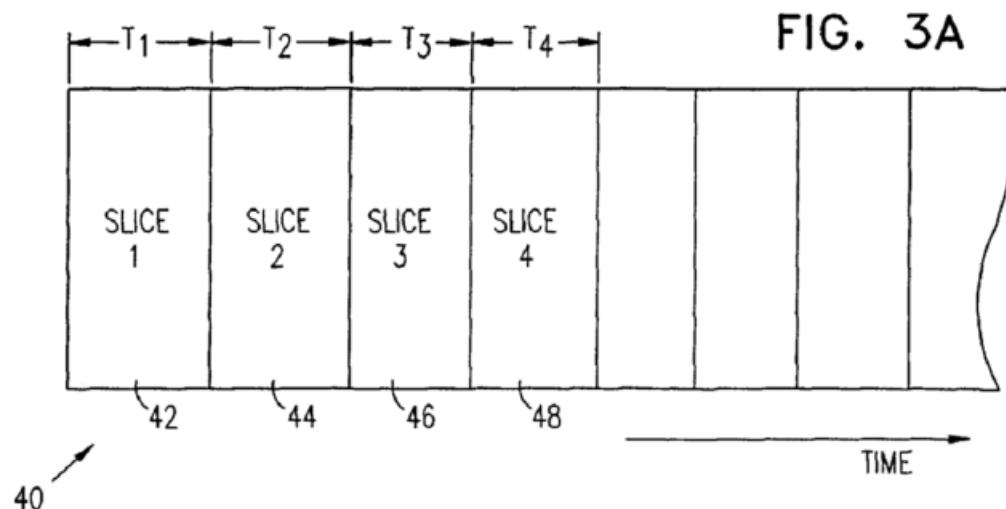
Appx21730-21731 (42:25-43:19); Appx21733 (45:5-13); Appx22385-22386 (144:12-145:4); Appx22883-22884 (650:19-651:13). The second, represented by Carmel Figures 3D and 6B (and data stream 41), transmits “a single-indexed file,” and allows a client to select from multiple quality levels—Carmel’s “single-file” embodiment. Appx9348 (2:22-27); Appx9351 (8:42-44); Appx9352 (10:64-67); Appx21730-21731 (42:25-43:19); Appx21733 (45:5-13); Appx22385-22386 (144:12-145:4); Appx22883-22884 (650:19-651:13). Amazon relied on only the separate-file, single-quality-level embodiment in its IPRs, and the Board likewise focused solely on that embodiment when determining that the challenged claims are unpatentable. Appx459-461.⁵

a. Carmel’s separate-file embodiment.

As depicted below in Carmel Figure 3A, the transmitting computer generates a multimedia data sequence in the form of a data stream (40). That data stream is made of a series of data slices (42, 44, 46, 48, etc.), with each slice containing a segment of video and/or audio data that corresponds to a respective, successive time interval (T1, T2, T3, etc.), as shown below. Appx9351 (7:22-25). Carmel describes

⁵ Below, the parties used different nomenclature to describe Carmel’s two embodiments, focusing on whether the client could change the quality level of the data stream. They referred to Carmel’s separate-file embodiment as its “single-level” or “single-quality-level” embodiment and referred to Carmel’s single-file embodiment as its “multi-level” or “multiple-quality-level” embodiment. *E.g.*, Appx20160; Appx20200-20202; Appx21743-21744 (55:7-56:13); Appx22385-22386 (144:12-145:4).

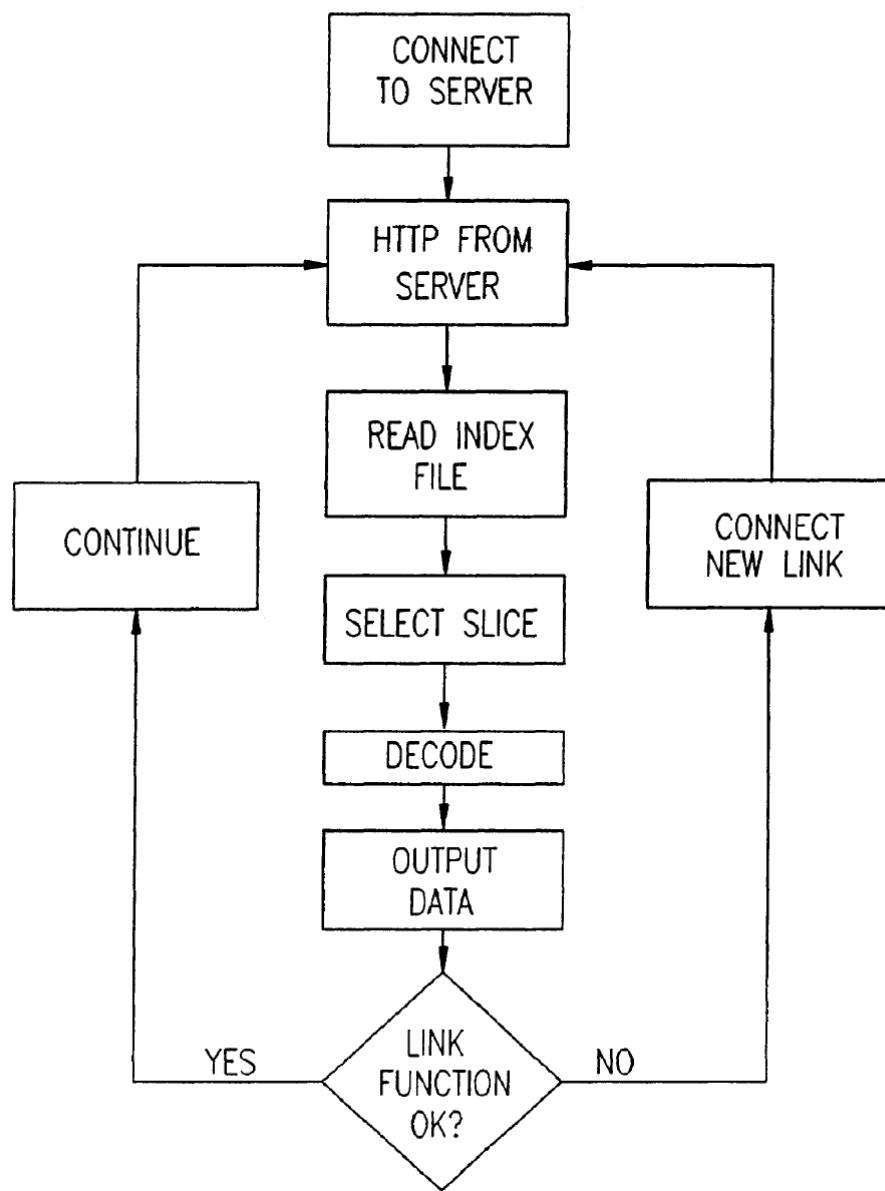
that “each segment or slice is contained in a separate, respective file.” Appx9348 (2:22-23); Appx9351 (7:27-28).



Appx9339. After preparing a multimedia sequence, Carmel’s transmitting computer uploads the sequence to Carmel’s server along with a separate index file identifying the numbered slices. Appx9351 (7:59-62).

Figure 6A of Carmel, below, “is a flow chart that schematically illustrates a method of downloading broadcast data from a server to client” in Carmel’s separate-file embodiment. Appx9350; Appx9352 (6:3-6, 10:24-27).

FIG. 6A

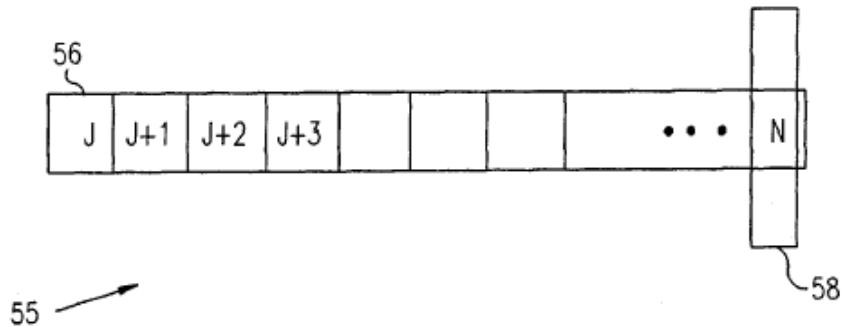


Appx9343.

As shown in Figure 6A, when client devices “connect[] to server 36 and begin[] to download the data stream, [they] first read[] the index file[.]” Appx9351

(8:2-3); Appx9352 (10:35-44). Then “graphic 56 (FIG. 3C) is displayed by the client, so that a user can decide and indicate at which slice of data stream 40 to begin downloading.” Appx9352 (10:42-45).

FIG. 3C



Appx9339.

After the clients choose which slice to begin streaming—the “SELECT SLICE” step in Figure 6A— “[t]he clients download the data stream from the server, preferably using an Internet protocol,” and “most preferably the Hypertext Transfer Protocol (HTTP).” Appx9348 (2:11-14); Appx9352 (10:35-47); Appx9354 (14:33-35); Appx9355 (15:18-21).

Carmel does not expressly disclose what “HTTP” method the client uses to select slices and download content from its server. But a skilled artisan would have recognized that a “GET request” is the most common method to retrieve separate files of data from a server in HTTP. Appx21706 (18:2-4, 18:15-20); Appx21736

(48:8-17); Appx22351-22352 (110:19-111:6); Appx23496-23497 (97:6-98:19).⁶

The relevant HTTP standards as of Carmel’s 1999 filing date—HTTP version 1.0 and HTTP version 1.1, Appx9348 (2:26-27); Appx20134; Appx22050 (¶50)—describe that, during a GET request, a client makes a request to the server for a specific resource such as a file, and the server responds by sending only that resource. Appx21907-21908 (§1.3); Appx23093-23094 (§1.4); Appx21927-21928 (§8.1); Appx23126 (§9.3). So, to stream a media program comprised of separate files—i.e., the individual slices in Carmel’s separate-file embodiment, Appx9348 (2:22-23)—using HTTP, a client would make successive GET requests to Carmel’s server, each request identifying a file containing a specific slice of data. Appx21735-21737 (47:21-49:15); Appx21751 (63:7-19).

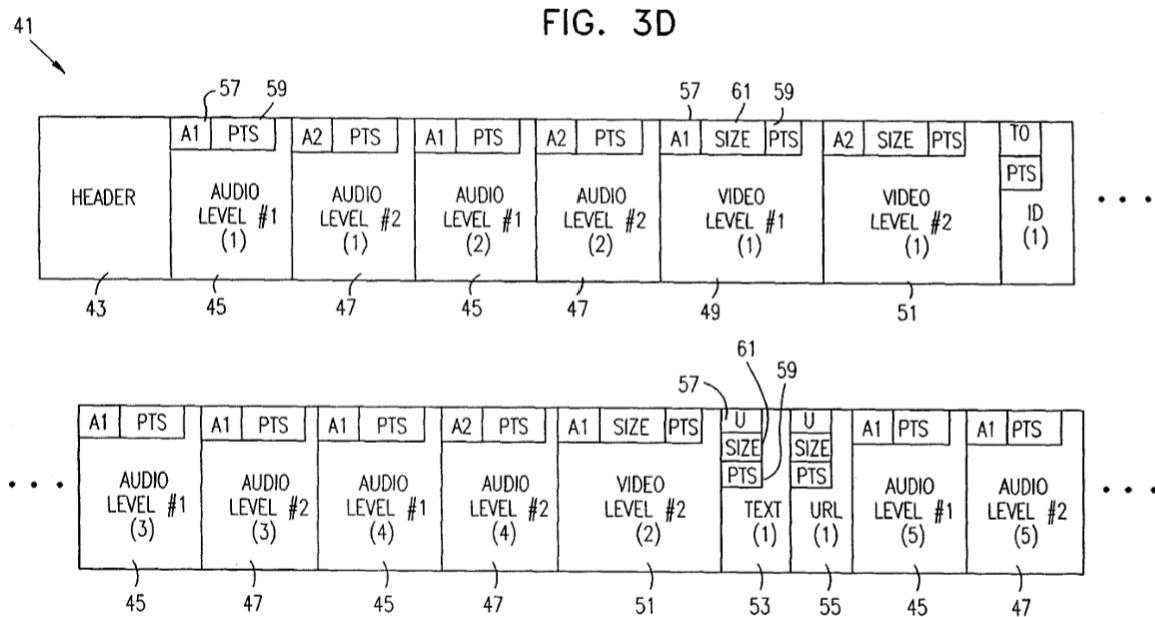
Carmel also discloses providing the data from the server to the client at a rate “generally equal to or faster than the rate at which the data are generated at the transmitting computer.” Appx9348 (2:51-59).

b. Carmel’s single-file embodiment.

Carmel’s single-file embodiment, depicted in Figures 3D and 6B, operates differently than its separate-file embodiment. As depicted below in Carmel Figure 3D, each “slice in [data] stream 41 includes multimedia data at multiple quality

⁶ WAG introduced the testimony of Disney’s expert, Dr. Henry Houh, from the Disney IPRs as evidence in the Amazon IPRs. Appx20113.

levels.” Appx9351 (8:56-57).⁷ “[T]he segments or slices [in this embodiment] may be all contained in a single indexed file,” and “HTTP versions 1.1 supports this sort of file streaming.” Appx9348 (2:23-27).⁸



Appx9340.

In the single-file embodiment, Carmel’s “client selects one of the available quality levels in the stream” and the server responds by sending “data slices at the chosen quality level.” Appx9353 (11:2-7).

* * *

⁷ By contrast, Carmel’s separate-file embodiment data stream (40) (Figure 3A) does not support multiple quality levels for audio or video. Appx9339.

⁸ WAG argues that “the index file is not required for streaming in Carmel, as Carmel supports multicast streaming.” OB14 n.9 (citing Appx9351 (8:9-11)). But WAG concedes that, in the embodiment at issue here, Carmel’s client “downloads and reads the index file” before choosing at which slice to begin streaming. OB14; Appx459-460.

As described above, there are important distinctions between Carmel’s two relevant embodiments. While both use HTTP to stream, in Carmel’s separate-file embodiment, each slice of data is its own “separate, respective file,” Appx9348 (2:22-23). The most common way for a client to obtain separate files from a server using HTTP is through successive GET requests for the respective files—a pull method, Appx21706 (18:2-4, 18:15-20); Appx21736 (48:8-17); Appx21751 (63:14-19); Appx22351-22352 (110:19-111:6); Appx23496-23497 (97:6-98:19); *see also* Appx9343 (“SELECT SLICE” step in Figure 6A). By contrast, in Carmel’s single-file embodiment, “the segments or slices may all be contained in a single indexed file,” which, when requested by the client, is sent using a different “sort of file streaming”—which may be considered a push method—supported by HTTP 1.1. Appx9348 (2:23-27); Appx22032-22033 (¶19); Appx22053-22054 (¶¶55-56); Appx22314 (73:2-15); Appx25641 (36:17-22).

2. Feig

Amazon also argued obviousness based on a combination of Carmel and Feig. Amazon relied on Feig for its disclosure of a client pull system where the client requests individual slices of data from a server to stream a program.

Feig discloses a method to allow an Internet browser to “induce a non-streaming server to simulate a streaming server.” Appx21682 (1:9-10). Feig extends “a standard HTML browser to support a new data type” called a “Uniform Resource

Locator Sequence (URLS).” Appx21682 (2:51-53). The URLS includes a Header and “ordered list URLS(j), where j is an index ranging from 1 to n” as shown in Fig. 1 reproduced below. Appx21683 (3:20-22).

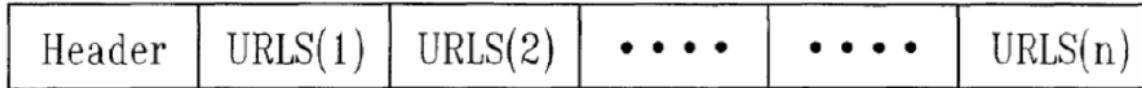


FIG. 1

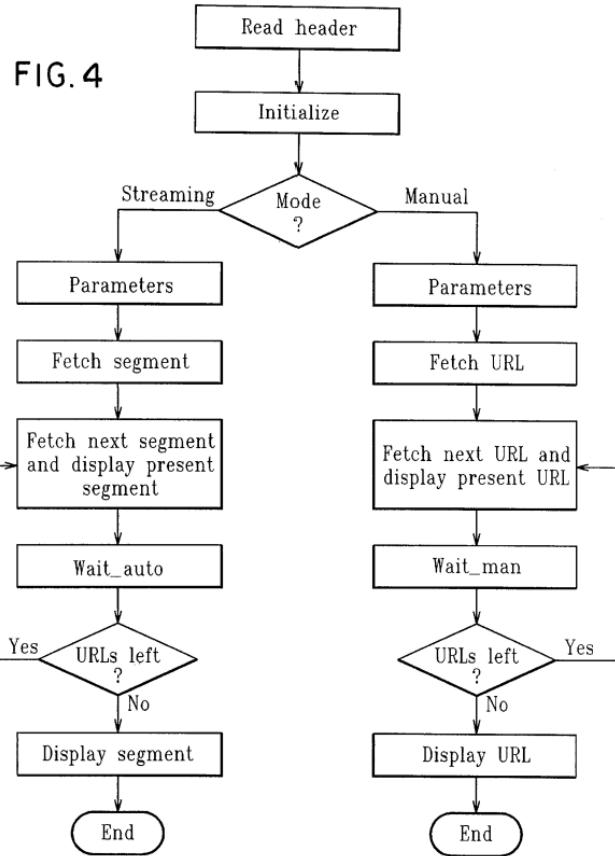
Appx21679.

The Header contains a header file describing “information regarding the type of data contained in the various subsequent URLS[(1) to URLS(n)].” Appx21683 (3:23-24). The data may include “text, images, audio, video, and other types of data.” *Id.* (3:24-26). Feig’s method “partitions the URLs comprising the URLS into segments.” *Id.* (4:66-67). For example, Feig creates a new sequence of URLS “by partitioning a data resource such as video into contiguous time segments, storing each segment in an Internet location and creating a URL for each of these segments.” Appx21682 (2:54-59). Each segment of video is referenced by one or more URLs.

In Feig’s streaming process, a web browser “sequentially accesses the data of each URL comprising the URLS.” Appx21682 (2:60-61). “This involves making requests for URL(l), URL(2), and so on, until URL(A1).” Appx21684 (5:17-18).

Feig “times the calls for subsequent URLs in the sequence accordingly so that the arrival of the linked data nearly simulates actual streaming.” Appx21678 (Abstract).

Feig also discloses that two client buffers store segments from the requested URLs. The web browser displays data stored in a first buffer (e.g., BUFF_A) while downloading and storing data in a second buffer (e.g., BUFF_B), “with one segment being stored in one buffer and the previous segment being played back from the other.” Appx21684 (5:24-40). As shown in Fig. 4 reproduced below, Feig’s method continues downloading and displaying the segments until “there are no more segments left to fetch.” *Id.* (5:37-40).



Appx21681.

C. The Proceedings Below

As noted above, Amazon argued that the challenged claims are invalid in light of Carmel alone, and Carmel combined with Feig. Appx19884-19959; Appx23810-23886. The Board instituted the IPRs against all challenged claims. Appx20023; Appx23950. And the Board invalidated all challenged claims under both rationales. Appx381-601. Because the parties raised the same substantive arguments in each IPR, Amazon cites only to the '824 patent IPR record for brevity.

1. The Board determined that Carmel alone renders the challenged claims obvious.

During the IPRs, WAG did not contest that Carmel discloses limitations 1.b, 1.c, 1.d, 1.e, 1.f,⁹ 1.g, 1.i, and 1.l of the challenged claims. Appx423-426; Appx428-429; Appx446; Appx467; Appx20110-20111; Appx20233-20242. For these uncontested limitations, the Board relied on Amazon's unrebutted evidence and argument to find those limitations disclosed by Carmel. Appx422-426; Appx428-430; Appx444-446; Appx467.

Where WAG contested limitations—limitations 1.a, 1.h, 1.j, and 1.k—the Board credited Amazon's evidence and argument over WAG's in finding them

⁹ WAG raised arguments with respect to the scope of limitation 1.f, e.g., Appx20122, but never argued that either Carmel or Feig failed to disclose the limitation. Appx428; Appx20130-20174; Appx20225-20242.

disclosed or obvious in light of Carmel. WAG first argued the Board should hold the preamble (limitation 1.a) limiting and construed to require the server to stream an entire program to the client. Appx421; Appx20120. The Board found no need to construe the claim, however, because it found the limitation met by Carmel's disclosure of streaming an entire program—i.e., “an interview program or an entertainment or sports request.” Appx421-422 (citing Appx9350 (6:57-59)).

Next, WAG challenged whether Carmel disclosed limitation 1.h's requirement that the connection between the server and client is faster than the playback rate of the media sent between them. Appx432-434. Here, the Board credited WAG's interpretation of the claim as requiring the connection to be able to provide a faster data rate than the playback rate and not as requiring that the instantaneous transfer rate be faster than the payback rate at all times. Appx434-436. But the Board nonetheless found the limitation met by Carmel's disclosure that “[w]hen the data stream comprises multimedia data, the data rate should be generally equal to or faster than the rate at which the data are generated at the transmitting computer.” Appx436 (citing Appx9348 (2:51-59)). And because Carmel teaches that, for a live or pre-recorded program, the generation rate matches the playback rate, Appx437, the Board concluded that Carmel's data rate is more rapid than the playback rate. Appx437-438.

WAG also contested whether Carmel discloses limitation 1.j, requiring, “the one or more media data element[s] sent are selected without depending on the server system maintaining a record of the last media data element sent to the requesting user systems.” Appx6834 (17:4-7). The Board found this limitation met by Carmel’s disclosure of its client “identify[ing] at what point in stream 40 to begin” downloading, Appx449 (citing Appx9351 (8:1-4)), and that “a user can decide and indicate at which slice of data stream 40 to begin downloading” using an indicator 58 with a graphic slider 55 displayed by Carmel’s client shown in Figure 3C. Appx449 (citing Appx9352 (10:42-44)). The Board concluded that “[t]he ability to move [the] indicator 58 ‘back and forth along bar 56’ and ‘jump back and forth along stream 40’ evidences client control ‘without depending on the server system maintaining a record of the last’ data slice sent.” Appx450 (citing Appx20581-20582 (¶¶147-149); Appx9351 (8:39-41)).

Finally, WAG challenged whether Carmel rendered obvious limitation 1.k based on its argument that Carmel fails to disclose a pull system where the client individually requests each data slice. Appx428; Appx454-458. Here, the Board determined that Carmel’s separate-file embodiment renders obvious the limitation based on Amazon’s expert’s, Dr. Jeffay’s, testimony that a skilled artisan “would have recognized that each slice file may be requested individually using an HTTP GET request, and the server would send each requested slice to the user system in

response' and 'no other slices.'" Appx461 (citing Appx20584-20585 (¶¶155-56); Appx23460-23461 (61:18-62:3)). And it credited Dr. Jeffay's testimony because it was supported by the HTTP standards, Appx462 (citing Appx21907-21908 (§ 1.3); Appx23093-23094 (§ 1.4)); Appx463 (citing Appx21927-21928 (§ 8.1)); Appx23126 (§ 9.3)), Carmel's instruction to use HTTP and its description that each time slice in its separate-file embodiment is stored as a separate file, Appx9348 (2:11-15, 2:22-23), testimony from WAG's expert, Appx464 (citing Appx21736 (48:15-17)), and other expert testimony WAG introduced into the proceeding, Appx464 (citing Appx23460-23461 (61:18-62:3)).

2. The Board determined that Carmel combined with Feig renders the challenged claims obvious.

Amazon relied on Feig along with Carmel for Feig's disclosure of limitations 1.f, 1.g, 1.h, 1.i, 1.j, and 1.k. Appx427-430; Appx440-441; Appx446; Appx466-467. WAG did not contest that Feig discloses limitation 1.f (Appx428), 1.g (Appx429), 1.h (Appx434), 1.i (Appx446), or 1.k (Appx454-458; Appx20172-20174; Appx20238-20242), and the Board found those limitations disclosed based on Amazon's unrebutted evidence and argument, Appx427-430; Appx440-441; Appx445-446; Appx466-467.

WAG argued that Feig did not disclose limitation 1.j's requirement that the client make individual requests for data slices without the server maintaining a record of the last media data element sent. Appx451-452. This was because,

according to WAG, Feig failed to disclose media data elements with their own serial identifiers, so the client could not identify and request individual elements. Appx449; Appx20237. The Board rejected WAG’s argument because Feig discloses a sequence of URLs—URLS(1) to URLS(n)—which “may be created by partitioning a data resource such as video into contiguous time segments, storing each segment in an Internet location and creating a URL for each of these segments.” Appx452 (quoting Appx21682 (2:54-59)). And because “[e]ach URLS[] comprises a URL identifying a segment of data,” “[f]or video partitioned into contiguous time segments, each URL in URLS(1) to URLS(n) corresponds to a ‘serial identifier’ according to claim 1, and each associated segment of data corresponds to a ‘media data element’ according to claim 1.” Appx452 (citing Appx21683 (3:4-5, 3:32-35); Appx21684 (6:18-20); Appx20541-20542 (¶71); Appx20582-20583 (¶150); Appx20585-20586 (¶157)).

3. The Board found that a skilled artisan would have been motivated to combine Carmel and Feig.

In its eleven-page analysis of the motivations to combine Carmel and Feig, the Board found several reasons why a skilled artisan would have been motivated to combine the references. Appx468-478. Those include advantages stemming from using Feig’s system with Carmel to allow “the client to precisely control and select the data it receives from the server,” which would “enable[] the combined [] system to operate without depending on the server maintaining a record of the last media

data element sent.” Appx473. The Board also determined that modification to Carmel would “complement[] Carmel’s goal of allowing a user to decide and indicate at which slice to begin downloading.” *Id.*

The Board also found that combining Carmel and Feig would alleviate any concerns about “buffer overruns” that might occur in Carmel’s system. *Id.* It noted that Feig achieves that goal by disclosing “a technique for monitoring buffer fullness that . . . determines when ‘all the data’ for a buffer arrives.” *Id.* (citing Appx25601 (5:16–43)). By using two alternating buffers at the client to store respective segments, Feig avoids the risk of buffer overflow. *Id.*

The Board further determined that using Feig’s streaming process in Carmel would expand the types of servers that could be used with Carmel’s system to include non-streaming servers. Appx474. And that a skilled artisan would be motivated to use Feig’s teachings related to HTTP “with Carmel to quickly move data slices from the server to the clients to support playback with a minimum number of dropouts.” Appx475.

D. Dr. Jeffay’s ITC Testimony

Dr. Kevin Jeffay was Amazon’s expert in the IPRs, Appx20512, and had testified about Carmel in an ITC proceeding between Dish Technologies and Icon Health & Fitness, Appx22532; Appx22568. In the ITC, Dr. Jeffay testified on behalf

of the complainant patent owner, Dish Technologies. Appx22255-22256 (14:6-15:4); Appx22352 (111:13-22); Appx22356 (115:12-17); Appx22359 (118:7-16).

Dish asserted several patents unrelated to those at issue here,¹⁰ and Icon, the respondent, asserted Carmel as an invalidating prior art reference. Appx22703; Appx22717. But Icon did not rely on Carmel’s separate-file embodiment as Amazon does here. Nor did it rely on obviousness. Rather, Icon asserted anticipation based on Carmel’s single-file embodiment, as well as a combination of Carmel’s embodiments. Appx22703-22709; Appx22385-22387 (144:12-146:2); Appx22883 (650:19-24).

Consistent with his testimony in the Amazon IPRs, Dr. Jeffay testified in the ITC that Carmel discloses two separate embodiments—the separate-file and single-file embodiments.¹¹ Appx22874 (641:15-19); Appx22883-22884 (650:25-651:21); Appx22385-22386 (144:12-145:4). Dr. Jeffay testified that Figures 6A and 6B “are completely separate figures describing separate embodiments and completely different operations of [Carmel’s] client.” Appx22884 (651:10-13). Also consistent with his IPR testimony, Dr. Jeffay testified in the ITC that Carmel’s single-file

¹⁰ Dish asserted U.S. Patent Nos. 9,407,564; 10,469,554; 10,469,555; 10,757,156; and 10,951,680. Appx22532.

¹¹ In his ITC testimony, Dr. Jeffay referred to Carmel’s separate-file embodiment as the “first embodiment” or “single-level embodiment,” and Carmel’s single-file embodiment as the “multi-level data stream embodiment” or the “multi-level embodiment.”

embodiment discloses a push system. Appx22873-22874 (640:17-641:19); Appx22385-22386 (144:12-145:4).

In the ITC, no one asked Dr. Jeffay whether Carmel's separate-file embodiment used a push or pull system. He was asked about a specific statement in his direct testimony about Carmel's single-file embodiment: that "Carmel's *level selection* plus a starting time is not a request for an independently requestable streamlet." Appx22873 (640:17-20) (emphasis added). And Dr. Jeffay explained that, after a client selects the quality level in Carmel's single-file embodiment, "the server will simply start pushing data to the client[,]" and thus that embodiment "does not disclose a request for . . . an independently requestable streamlet." Appx22873-22874 (640:24-641:23). Dr. Jeffay later stated that Carmel does not expressly disclose independently requestable slices "in terms of the single level embodiment," Appx22370-22371 (129:25-130:1), but clarified during his IPR deposition that his comments about the separate-file embodiment "were about this crazy combination of data stream 40 and data stream 41 that [Icon] was trying to do," Appx22386 (145:5-25).

And finally, again in the context of addressing Carmel's single-file embodiment, Dr. Jeffay testified in the ITC that that embodiment need not be (and is not) implemented using successive HTTP GET requests to stream a file.

Appx22869-22873 (636:18-640:2).¹² And he provided examples of other methods that Carmel’s single-file embodiment could employ to push data from the server to the client, including HTTP version 1.1’s “chunked transfer encoding,” where, following a single GET request requesting “a higher-level object like a stream,” “in each HTTP response, [the server] send[s] a sequential portion of the content that’s being requested.” Appx22871-22872 (638:24-639:4); *see also* Appx23104-23105 (§3.6); Appx23215-23216 (§19.4.6).

In sum, Dr. Jeffay’s ITC testimony addressed arguments that Carmel’s single-file embodiment alone or in combination with its separate-file embodiment anticipated patent claims unrelated to those at issue here. He did not address obviousness, nor whether a skilled artisan would have understood successive GET requests to be an obvious implementation of Carmel’s separate-file embodiment.

SUMMARY OF ARGUMENT

Amazon’s appeal presents this Court with two bases to affirm this consolidated appeal. First, substantial evidence supports the Board’s determination that Carmel alone renders the challenged claims obvious. The Board determined that Carmel rendered obvious a pull-based system because a skilled artisan reading Carmel would know to implement its separate-file embodiment via a client making

¹² This contrasts with requests for separate files, like those in Carmel’s separate-file embodiment, which both WAG’s and Amazon’s expert agree would be performed through successive GET requests. Appx453-454; Appx461-464.

a series of GET requests for individual files (each data slice in Carmel). Indeed, both Amazon’s *and* WAG’s experts agreed that this understanding of a skilled artisan’s knowledge was correct.

Second, the Court can affirm based on the combination of Carmel and Feig. On appeal, WAG does not challenge that this combination discloses every limitation of the challenged claims. Instead, WAG’s appeal of this ground is limited to whether the Board’s finding of a motivation to combine the references is supported by substantial evidence. But in attacking the Board’s findings, WAG addresses only one of several motivations the Board credited. And even the lone motivation WAG challenges is supported by substantial evidence. Lastly, WAG argues that the Board failed to consider that the combination would change Carmel’s mode of operation from a push to a pull system. This argument fails too. Carmel discloses that its separate-file embodiment employs HTTP methods to download the separate files, and undisputed evidence supports the Board’s determination that the most common way to do that is by a client making successive GET requests—i.e., a pull system.

ARGUMENT

I. STANDARD OF REVIEW

“[O]bviousness . . . is a question of law based on underlying findings of fact.”

Kennametal, Inc. v. Ingersoll Cutting Tool Co., 780 F.3d 1376, 1381 (Fed. Cir. 2015) (quoting *Flo Healthcare Solutions, LLC v. Kappos*, 697 F.3d 1367, 1375 (Fed. Cir.

2012). This court “review[s] the Board’s ultimate obviousness determination de novo and underlying factual findings for substantial evidence.” *Facebook, Inc. v. Windy City Innovations, LLC*, 973 F.3d 1321, 1339 (Fed. Cir. 2020) (citing *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016)).

“Factual determinations reviewed for substantial evidence include” (1) “the scope and content of the prior art,” (2) “differences between the prior art and the claims at issue,” (3) “the level of ordinary skill in the pertinent art,” and (4) “the motivations to modify or combine prior art.” *Parkervision, Inc. v. Vidal*, 88 F.4th 969, 981-82 (Fed. Cir. 2023). Substantial evidence is “such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.” *Richardson v. Perales*, 402 U.S. 389, 401 (1971). “[W]here two different, inconsistent conclusions may reasonably be drawn from the evidence in record, an agency’s decision to favor one conclusion over the other is the epitome of a decision that must be sustained upon review for substantial evidence.” *In re Jolley*, 308 F.3d 1317, 1329 (Fed. Cir. 2002).

II. THE BOARD CORRECTLY DETERMINED THAT CARMEL ALONE RENDERED THE ASSERTED CLAIMS OBVIOUS

The crux of WAG’s appeal argument is that Carmel does not disclose a client system that makes repeated requests for data slices. OB2, OB4, OB13. WAG makes two primary arguments about Carmel:

[F]irst, the claims must be construed to require repeated requests for MDEs by their respective serial identifiers; second, there is no substantial evidence that Carmel discloses any such streaming mechanism.

OB13.

WAG’s lead argument is that the Board misinterpreted the claims to not require individual client requests for successive slices of data. OB17-20, OB35. But WAG concedes that in the Amazon IPRs the Board held that the “claims [] requir[e] *repeated* requests for successive elements.” OB19; *see also* OB12. So, WAG’s claim construction arguments are not applicable to WAG’s appeal of the Amazon IPRs because the Board interpreted the claims as WAG proposed below and found that Carmel nonetheless disclosed or rendered obvious those limitations. *See* Appx19-21; Appx420-422 (limitation 1.a); Appx428-429 (limitation 1.f); Appx434-435 (limitation 1.h); Appx448-449 (limitation 1.j); Appx454-458 (limitation 1.k).

The only question before the Court with respect to WAG’s appeal of the Board’s Carmel-only determination is whether a skilled artisan would have considered it obvious to implement Carmel’s separate-file embodiment as a pull system using the most common HTTP process—GET requests. The Court should affirm because the substantial evidence supports the Board’s findings.

A. Substantial Evidence Supports the Board’s Determination that a Skilled Artisan Reading Carmel Would Understand it to Render Obvious a Pull System Where the Client Individually Requests Data Slices.

The parties disputed whether a skilled artisan reading Carmel would understand it to render obvious a pull system in the context of limitation 1.k, which requires a server to send specifically identified media data elements in response to requests from the client. Appx6833 (16:52-64); Appx6834 (17:8-10).

To find that limitation obvious to a skilled artisan, the Board relied on testimony from both Amazon’s and WAG’s experts that Carmel discloses two separate embodiments—the separate-file embodiment and the single-file embodiment. Appx460 (citing Appx22385 (144:12-20); Appx22883-22884 (650:25-651:21); App21730-21731 (42:25-43:8)). And the Board correctly noted that Amazon’s challenge relied exclusively on Carmel’s separate-file embodiment depicted in Figures 3A and 6A. Appx460; Appx19924-19927; Appx19929-19930; Appx19943-19944.

The Board also relied on Carmel’s disclosure that its client systems can download the “sequence using an Internet download protocol, most preferably HTTP.” Appx459; Appx9349 (3:63-66); Appx9350 (5:25-28). The Board further recognized that, as of the earliest claimed priority date of the patents, two HTTP standards were relevant to determine how a client would download data—the HTTP 1.0 and HTTP 1.1 standards. Appx461-462; Appx9348 (2:26-27). The Board noted

that those standards disclose a client sending a request to a server and the server responding in kind. Appx462 (citing Appx21907-21908 (§1.3); Appx23093-23094 (§1.4)). Both versions of the HTTP standard refer to this as a “GET request,” and they also note that, when a client sends a GET request for a specified file, the server sends only that file. Appx463 (citing Appx21927-21928 (§8.1); Appx23126 (§9.3)).

The Board acknowledged that “Carmel does not mention an HTTP GET request,” Appx463, but it nonetheless determined, relying on both Amazon’s and WAG’s experts’ testimony, that “an ordinarily skilled artisan would have recognized a GET request as the most common method to fetch data in HTTP” when requesting separate files. Appx463-464 (citing Appx21706 (18:2-4, 18:15-20); Appx21736 (48:8-17); Appx22351-22352 (110:19-111:6); Appx23496-23497 (97:22-98:2)¹³).

The Board found that the evidence cited above supported Dr. Jeffay’s testimony that a skilled artisan “would have recognized that each slice file may be requested individually using an HTTP GET request, and the server would send each requested slice to the user system in response” and “no other slices.” Appx461 (citing Appx20584-85 (¶¶155-156)). So too did testimony from WAG’s expert that, to receive “individual files, you have to, by definition, make individual requests.” Appx464 (citing Appx21736 (48:15-17)). And the Board also credited Dr. Houh’s

¹³ As noted previously, WAG introduced the testimony of Disney’s expert, Dr. Henry Houh, into evidence in the Amazon IPRs. Appx20113.

testimony that in Carmel’s pull embodiment, the server “provides all such requested slices to the client and no other slices.” Appx464 (citing Appx23460-23461 (61:18-62:3)).

In sum, the Board’s determination that a skilled artisan reading Carmel would understand it to render obvious a pull system is supported by substantial evidence. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1372–73 (Fed. Cir. 2019) (affirming Board’s determination that a single reference rendered claims obvious where challenger relied on other documents to expand on the reference’s disclosures); *see also Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524, 1534 (Fed. Cir. 1987) (A “patent need not teach, and preferably omits, what is well known in the art.”); *id.* (skilled artisan would recognize moly-manganese brazing based on patents discussion of brazing generally and because moly-manganese brazing was the most common bonding method).

B. WAG’s Contrary Arguments Fail to Show the Board Lacked Substantial Evidence to Conclude that Carmel Renders the Challenged Claims Obvious.

WAG’s opening brief lodges a series of complaints about the Board’s treatment of Carmel. OB35-57. WAG argues that the Board erred in finding that Carmel (1) expressly (2) inherently and (3) implicitly discloses a pull system. *Id.* But, as explained below, most of WAG’s arguments are relevant, if at all, only to the Disney IPRs. WAG’s few arguments that are pertinent to the Amazon appeal

merely ask this Court to reweigh evidence rather than show that the Board's determination below was not based on substantial evidence. For those reasons, WAG's Carmel-based challenges fail.

1. The Board recognized that Carmel does not expressly disclose a pull system but nonetheless found it obvious.

WAG argues that the Board's unpatentability determination is not supported by substantial evidence because neither Figure 6A nor the text of Carmel expressly discloses a pull system. OB36-38; OB40-44.¹⁴ And WAG further argues that the only evidence supporting the Board's determination that it would have been obvious to a skilled artisan that Carmel implements a pull system is "conclusory" expert testimony. OB38. Not so.

The Board acknowledged that Carmel itself does not disclose the implementation details of what "HTTP" process its client uses to download media.

¹⁴ WAG's arguments about "HTTP FROM SERVER," OB40-41, "Alleged meaning of 'download,'" OB41-42, and "Lack of flow control," OB42-43, are premised on Carmel's lack of express disclosure of multiple client requests. *E.g.*, OB40 ("There is no indication in the Figure about any 'requests.'"); OB41 (arguing there is no "request whatsoever [] disclosed for any identified slice other than the first"); OB42 ("There is no evidence that merely to 'download' material that arrives sequentially implies that there were separate requests for each of the successive increments."); OB43 ("Carmel discloses nothing, in these figures or otherwise, that would trigger requests tied to when the client needs data, *e.g.*, to keep a client-side playback buffer at a desired level to ensure continuity in the face of internet disruptions and irregularities, which were to be expected."). These arguments all rest on WAG's erroneous assumption that Carmel must expressly disclose that which would have been known and obvious to a skilled artisan.

Appx463. Yet it determined that Carmel renders a pull system obvious because of the undisputed testimony and evidence that (1) HTTP GET requests are the most common way for a client to download separate files from a server using HTTP and (2) a skilled artisan would have found it obvious to implement Carmel's separate-file embodiment using HTTP GET requests. Appx458-466 (citing Appx9348 (2:26-27); Appx21907-21908 (§1.3); Appx23093-23094 (§1.4); Appx21927-21928 (§8.1); Appx23126 (§9.3); Appx21706 (18:2-4, 18:15-20); Appx21736 (48:8-17); Appx22351-22352 (110:19-111:6); Appx23496-23497 (97:6-98:19); Appx20584-20585 (¶¶155-156); Appx21736 (48:15-17); Appx23460-23461 (61:18-62:3)).

Thus, contrary to WAG's argument, the Board did not "repeatedly stretch[] to find what a POSITA 'would understand' from disclosures that were literally short of what was asserted." OB54. It relied on substantial evidence supporting its findings, including other documents and the undisputed knowledge of a skilled artisan to explain Carmel's disclosure. *Realtime Data*, 912 F.3d at 1372-73; *Spectra-Physics*, 827 F.2d at 1534.

2. The Board correctly distinguished between Carmel's embodiments.

WAG also argues that the Board erred in determining that a skilled artisan would read Carmel's separate-file embodiment as rendering obvious a pull system, OB39-40, and that the Board was wrong to distinguish between Carmel's two embodiments. OB49-50.

One major flaw in WAG’s arguments is that the Board did not rely solely on Amazon’s evidence and expert testimony (which was extensive, as detailed above). Rather, WAG’s expert’s admissions alone constitute substantial evidence supporting the Board’s findings. Those admissions include that Carmel discloses two embodiments, Appx25646 (41:11-16); Appx21731 (43:9-12), each having a different data structure, Appx25647-25648 (42:25-43:8). That, for Carmel’s separate-file embodiment, “a person of ordinary skill in the art would understand that one way to retrieve the slices is by successive GET requests,” Appx25647 (42:6-15), “the most common request in HTTP 1.1,” Appx25623 (18:2-4). WAG’s expert also acknowledged that, for Carmel’s single-file embodiment, a client could obtain “the entire contents of [a] file” with a single request, consistent with a push mechanism, Appx25647 (42:16-24), such as by using chunked transfer encoding, Appx21750 (62:11-23).

The Board also explained that HTTP 1.1’s introduction of chunked transfer encoding does not undermine what a skilled artisan would have understood about Carmel’s separate-file embodiment. Appx464-465. The Board credited WAG’s expert’s explanation that “chunked encoding ‘is just a way for a server to break up a single response to a request into smaller pieces and return the response to the client as a series of small chunks,’” *id.* (citing Appx21723-21724 (35:23-36:2)), and that chunked transfer encoding cannot be used to request multiple, separate files, *id.*

(citing Appx21751 (63:14-19)). So even if Carmel’s separate-file embodiment used chunked transfer encoding to break up a single requested file into smaller chunks, the Board correctly recognized that “the server does not send multiple slice files in response to a GET request for a single slice file.” Appx464 (citing Appx21723-21724 (35:23-36:5); Appx21751 (63:14-19); Appx23104-23105 (§3.6); Appx23460-23461 (61:18-62:12); Appx23464-23465 (65:10-66:6); Appx23468 (69:10-18); Appx23477 (78:7-10); Appx23478 (79:9-12); Appx23481-23482 (82:6-83:12); Appx23517-23519 (118:16-120:2)). In short, even if Carmel’s separate-file embodiment used chunked transfer encoding, the client would still need to make successive GET requests to obtain more than one file and stream a program. Appx464.

Given the evidence above, the Board’s rejection of WAG’s arguments that both of Carmel’s embodiments are push systems is supported by substantial evidence. *Neapco Drivelines LLC v. Am. Axle & Mfg., Inc.*, 847 F. App’x 856, 859 (Fed. Cir. 2021) (prior art’s disclosure along with opposing expert’s admission is substantial evidence to support Board’s unpatentability determination); *see also Energy Transp. Grp., Inc. v. William Demant Holding A/S*, 697 F.3d 1342, 1351 (Fed. Cir. 2012) (relying on opposing expert’s admissions to find substantial evidence supporting written description).

3. The Board appropriately determined that Dr. Jeffay's IPR testimony was consistent with his ITC testimony and did not undermine Amazon's IPR arguments.

WAG also contends that Dr. Jeffay's ITC testimony undermines the Board's unpatentability determinations. According to WAG, Dr. Jeffay testified in the ITC that Carmel uses a "push" system, OB47, it "implement[s] chunk transfer encoding," and there are "[n]o client 'requests' disclosed in Carmel." OB39. WAG then claims the Board "wholesale ignored, without any discussion, the contrary prior testimony of Amazon's own expert." OB53; *see also* OB40, OB49. WAG is mistaken.

As a preliminary matter, WAG argues that Dr. Jeffay's testimony about Carmel's *single-file* embodiment undercuts the Board's determinations that Carmel's *separate-file* embodiment *discloses* a pull system. OB5, OB39. But as explained above, in the Amazon IPRs the Board determined that a skilled artisan would have recognized that it would have been obvious to implement Carmel's separate-file embodiment as a pull, meaning WAG's arguments about Carmel's express disclosure are inapplicable here.¹⁵

¹⁵ Nor is Dr. Jeffay's testimony relevant to this Court's consideration of the Disney IPRs. Dr. Jeffay's testimony was not before the Board in those IPRs, and this Court's precedent is clear that it "cannot review new evidence" presented for the first time on appeal. *Lopez v. Merit Sys. Prot. Bd.*, 181 F. App'x 984, 986 (Fed. Cir. 2006); *see also Oshiver on Behalf of Oshiver v. Off. of Pers. Mgmt.*, 896 F.2d 540, 542 (Fed. Cir. 1990) ("We will not consider the new evidence contained in the supplemental papers because that evidence was not presented to the Board."); FRAP 10(a).

Further, this Court has repeatedly held that the Board's credibility determinations are entitled to deference so long as they are supported by substantial evidence. *Incept LLC v. Palette Life Scis., Inc.*, 77 F.4th 1366, 1377 (Fed. Cir. 2023); *Yorkey v. Diab*, 601 F.3d 1279, 1284 (Fed. Cir. 2010). And that “[i]t is within the discretion of the trier of fact to give each item of evidence such weight as it feels appropriate.” *Velander v. Garner*, 348 F.3d 1359, 1371 (Fed. Cir. 2003).

Far from ignoring Dr. Jeffay's ITC testimony, the Board provided a five-page analysis considering and rejecting the same arguments WAG recycles here. Appx484-489. The Board first recognized that, unlike Dr. Jeffay's focus on Carmel's separate-file embodiment in the Amazon IPRs, in the ITC proceeding Dr. Jeffay testified about Carmel's single-file embodiment “and a proposed ‘combination of data stream 40 and data stream 41 that the other side was trying to do.’” Appx485 (citing Appx26303-26304 (145:5–146:2)). So, Dr. Jeffay's ITC testimony that Carmel's “client [] is limited to selecting a quality level rather than requesting individual files” and “that Carmel's system could be implemented” using chunked transfer encoding to push slices to the client “without the client requesting individual portions or slices,” applied only to Carmel's single-file embodiment because only that embodiment permits the client to select a quality level. Appx486 (citing Appx22705; Appx26789-26790 (639:1-640:2); Appx9350-9353 (5:46-48, 5:58-60, 6:3-10, 7:18-35, 8:42-9:9, 10:24-11:22); Appx9339-9340 (Figs. 3A, 3D);

Appx9343-9344 (Figs. 6A–6B). None of this applies to Amazon’s separate-file embodiment arguments at issue here. And WAG does not directly challenge Dr. Jeffay’s corroborated testimony that a skilled artisan would have found it obvious to implement this embodiment using successive HTTP GET requests, i.e., as a pull system. Appx21706 (18:2-4, 18:15-20); Appx21736 (48:8-17); Appx22351-22352 (110:19-111:6); Appx23496-23497 (97:22-98:12). Thus, the Board properly found nothing inconsistent between Dr. Jeffay’s ITC testimony and his IPR testimony that a skilled artisan “would have recognized that each slice file may be requested individually using an HTTP GET request” in Carmel’s separate-file embodiment which stores data slices as “separate, respective files.” Appx486-487; Appx9348 (2:22-23).

The Board also credited Dr. Jeffay’s explanation that any reference he made to Carmel’s separate-file embodiment in the ITC was in context of addressing the respondent’s proposed combination of data streams 40 and 41 from Carmel’s separate embodiments. Appx487. Here, the Board relied on the ALJ’s initial determination, which faulted the patent challenger for improperly relying on “multiple, distinct teachings”—Carmel’s separate embodiments—to show anticipation. *Id.*; Appx22707-22709.

In sum, “[a]fter considering Dr. Jeffay’s testimony in the ITC investigation [] in the context of the claims and the anticipation defense at issue in the ITC

investigation,” the Board disagreed with WAG “that Dr. Jeffay’s testimony in this proceeding conflicts with his testimony in the ITC investigation.” Appx488. Because that credibility determination is supported by substantial evidence, the Court should defer to it here. *Yorkey*, 601 F.3d at 1284; *Velander*, 348 F.3d at 1371.

4. The Board’s separate reexamination decision does not support WAG.

WAG argues that the Board, in a reexamination proceeding concerning a related patent—U.S. Patent No. 8,122,141—determined that Carmel fails to disclose “any requests for any element after the first, separately or otherwise, let alone by serial ID.” OB5, OB50-51 (citing Appx23613-23621). But as the Board below recognized, this decision does not support WAG’s argument for four reasons. Appx465. First, in the reexamination proceeding, the examiner relied on Carmel’s *single-file embodiment*, which, as explained above, uses a “single indexed file.” *Id.* Second, in that reexamination the Board faulted the examiner for relying on a combination of Carmel’s separate-file and single-file embodiments, without citing any support for doing so. *Id.* Third, the examiner asserted that Carmel’s single-file embodiment *anticipated* the claim. And fourth, the examiner did not have the benefit of expert testimony. Appx465; Appx23616-23617. Because Amazon argued obviousness based solely on Carmel’s separate-file embodiment and presented testimonial evidence that was unavailable in the reexamination proceeding, the

Board below correctly determined that the reexamination decision did not undermine its unpatentability determination. Appx465-466.

5. WAG did not contest that Carmel discloses limitations 1.f and 1.g below, and it raised its new 1.j argument for the first time on appeal.

WAG argues that Carmel does not disclose limitations 1.f and 1.g, (OB55-56), but WAG forfeited these arguments by not raising them below. Appx428 (noting WAG did not contest limitation 1.f); Appx429 (same for 1.g). *In re Google Tech. Holdings LLC*, 980 F.3d 858, 863 (Fed. Cir. 2020). And to the extent WAG’s appeal arguments are based on Carmel failing to render obvious a pull system, they fail on the merits for the reasons explained above.

While WAG contested limitation 1.j below, here WAG raises a new challenge to the Board’s determination that Carmel discloses “the one or more media data element sent are selected without depending on the server system maintaining a record of the last media data element sent to the requesting user systems.” Specifically, WAG contends that Carmel’s Figure 8 discloses a “server-side counter.” OB56. And that Carmel’s “server-side counter” maintains a record of the last media data element sent to the client. *Id.*

But before the Board, WAG argued only that Carmel does not disclose this limitation because Carmel discloses a push system where the server sends “the entire stream after the first slice is selected.” Appx448-449; Appx20165-20166;

Appx20236-20237. Because WAG never presented its new argument to the Board, the Court should not consider it. *In re Google Tech.*, 980 F.3d at 863.

WAG moreover failed to show that the Board's finding as to limitation 1.j lacks substantial evidence. The Board relied on Carmel's disclosure that "a user can decide and indicate at which slice of data stream 40 to begin downloading" using an indicator 58 with a graphic slider 55 as shown in Carmel Figure 3C. Appx449 (citing Appx9531 (8:1-4); Appx9352 (10:42-44)). WAG provides no reason not to credit the Board's conclusion that the ability to move the indicator 58 "back and forth along bar 56" and "jump back and forth along stream 40" evidences client control "without depending on the server system maintaining a record of the last" data element sent. Appx450.

The Board also credited Dr. Jeffay's testimony that "it is unnecessary for the server to track the segment state" because Carmel's indicator "allows for random access into the file stream, and playback occurs by requesting sequential segments." Appx450 (citing Appx20582 (¶149)). During playback, the client continues to use the indicator to request sequential segments, e.g., corresponding to indices J+1, J+2, J+3 as shown in Figure 3C. Appx9351 (8:20-26). Dr. Jeffay further testified it would be disadvantageous for Carmel's server to track the segment state because this "could conflict and/or cause race conditions with new input selections made by the user." Appx450 (citing Appx20582 (¶149)).

There is more than substantial evidence to support the Board's conclusion that Carmel discloses limitation 1.j.

6. WAG's Disney-specific challenges are not at issue in the Amazon appeal.

WAG's remaining arguments are inapplicable to the Amazon appeal because they address arguments that Amazon did not raise or findings the Board did not make in the Amazon IPRs. The Court therefore need not address any of the following arguments to affirm the FWDs below.

The Amazon FWDs did not concern request overhead for limitation 1.k.

WAG criticizes the Disney FWDs for disregarding purported request "overhead" in Carmel in connection with limitation 1.k. OB44 (citing Appx214). In the Amazon IPRs, however, WAG did not raise request overhead as an issue with respect to limitation 1.k. Appx454-458. While WAG did raise request overhead in the context of limitation 1.h, Appx434, WAG does not contest limitation 1.h on appeal.

The Amazon FWDs did not rely on successive alternation.

WAG argues the Board's finding in the Disney IPRs that a skilled artisan "would have understood that downloading by alternative links requires a separate request for each link that causes the server to return a single file on each link" does not support the Board's conclusions about Carmel. OB44-46. The Board relied on no such finding in the Amazon FWDs. In any event, WAG's argument is

undermined by its expert's agreement that a client opening a new link would need to send an HTTP GET request to tell the server what slice it wanted, Appx21752 (64:6-12), and continue to send such requests for subsequent slices, Appx21730 (42:6-15); Appx21737 (49:1-15); Appx21751 (63:7-19).

The Amazon FWDs did not rely on repeated user (human) restarts.

WAG faults the Disney IPR FWDs for stating that “[w]hen the client repeatedly performs the steps in [Figure 6A’s] loop, the client repeatedly selects “an appropriate starting slice … and causes the server to send all of the selected slices in response to requests from the client.” OB46. The Board did not rely on this logic in the Amazon IPRs.

The Board below did not rely on “comprising.”

WAG argues that the Disney IPR FWDs cannot be affirmed because the Board overrode a claim limitation by stating that “[i]f the server sends all of the selected slices but also sends other slices, that does not negate Figure 6A’s relevance to limitation 1.k.” OB46-47. The Board made no such statement in the Amazon IPRs. It found the relevant claim limitations met under WAG’s interpretation of the claims.

The Amazon FWDs did not rely on Carmel requiring special purpose hardware to implement a push in its single-file embodiment.

WAG argues that the Disney IPR FWDs erred by concluding that neither of Carmel’s embodiments disclose a push because that would require “special-purpose

hardware.” OB47-49. In the Amazon IPRs, the Board made no such determination. Rather, presented with different evidence, the Board disagreed with WAG’s argument that Carmel disclosed only a push system and WAG’s argument that Carmel teaches away from a pull system for the reasons described above. Appx463-466; Appx475.

Amazon did not rely on inherent disclosure.

WAG argues that Carmel does not inherently disclose a pull system because a skilled artisan need not necessarily implement Carmel using a client-side HTTP GET request. OB51-52. But WAG concedes that “Amazon did not argue inherency” below, OB51, and thus the Board’s determinations in the Amazon IPRs did not rely on that theory.

The Board’s FWDs below did not rely on Carmel’s single-file embodiment.

WAG argues that the Board’s reliance on Figure 6B—depicting Carmel’s single-file embodiment—in the Disney IPRs undermines the Board’s determination that Carmel renders obvious a pull system for either of its embodiments. OB54-55. Neither Amazon nor the Board relied on Figure 6B in the Amazon IPRs, Appx488-490, and, as noted above, the Board determined that a skilled artisan would have understood the two embodiments to be separate, Appx475.

III. THE BOARD DID NOT ERR IN FINDING A MOTIVATION TO COMBINE CARMEL AND FEIG

This Court should affirm based on the Board’s determination that Carmel in combination with Feig renders the challenged claims obvious. On appeal, WAG does not contest that this combination discloses every limitation of the challenged claims. As noted above, here, WAG contests only whether Carmel teaches limitations 1.f, 1.g, 1.j,¹⁶ and 1.k. OB55-56. Yet the Board found that Feig disclosed each of these limitations. Appx428-430 (1.f and 1.g); Appx451-452 (1.j); Appx466-467 (1.k). As WAG failed to challenge those factual findings in its opening brief, it forfeited its ability to do so, and they are now final. *Bozeman Fin. LLC v. Fed. Rsrv. Bank of Atlanta*, 955 F.3d 971, 974 (Fed. Cir. 2020) (“[A]rguments not raised in an appellant’s opening brief [are] waived absent exceptional circumstances.”).

Thus, WAG’s only challenge to Amazon’s Carmel-Feig invalidity theory is whether the Board’s finding that a skilled artisan would have been motivated to combine the references is supported by substantial evidence. OB57-62. Because the evidence amply supports that finding, Amazon’s Carmel-Feig combination provides an independent basis to affirm these consolidated appeals.

¹⁶ As explained previously, WAG forfeited its arguments as to limitations 1.f, 1.g, and 1.j. See Argument Section II.B.5.

A. The Board Credited Multiple Motivations to Combine Carmel and Feig, and Each is Supported by Substantial Evidence.

Here, relying on Amazon’s and WAG’s experts’ testimony and the references themselves, the Board credited several rationales for why a skilled artisan would have been motivated to combine Carmel and Feig. Appx468-478. This Court reviews such factual determinations for substantial evidence. *Parkervision*, 88 F.4th at 981-82.

The Board first recognized that each of Amazon’s proposed motivations to combine relied on testimony from Dr. Jeffay. Appx468. And in support of each motivation to combine, the Board repeatedly cited to Dr. Jeffay’s testimony that a skilled artisan would combine the reference because, at a high-level, they both “relate to streaming multimedia data over the Internet” and “provide purported improvements to drawbacks in prior art streaming solutions.” Appx468; Appx473; Appx474 (all citing Appx20546-20547 (¶77)). In the cited portion, Dr. Jeffay also testified that a skilled artisan “in possession of Carmel would have been aware of the difficulties of streaming multimedia data over” the typical links between internet service providers and their clients, “and would have looked to solutions like those in Feig [] that address these difficulties, and incorporated aspects of those solutions into Carmel’s approach.” Appx20546-20547 (¶77).

The Board then relied on several specific, concrete motivations to combine. First, it credited a trio of advantages that would have resulted from using Feig’s

system with Carmel to “allow[] ‘the client to precisely control and select’ the data it receives from the server.” Appx473. Citing to Dr. Jeffay’s testimony for supporting evidence, the Board concluded that modification would “enable[] the combined [] system to operate without depending on the server maintaining a record of the last media data element sent.” *Id.*; *see also* Appx20583-20584 (¶153). And that it would also “complement[] Carmel’s goal of allowing a user to decide and indicate at which slice to begin downloading.” Appx473; *see also* Appx20567 (¶120); Appx20569 (¶124); Appx20586 (¶158); Appx9352 (10:42-45).

The Board also determined that combining Feig with Carmel would alleviate any concerns about “buffer overruns” that might occur in Carmel’s system. Appx473; *see also* Appx19944-19945; Appx20206; Appx20544 (¶¶73-74). Here, the Board relied in part on WAG’s expert’s testimony that a skilled artisan would have understood the need to monitor buffer fullness. Appx473 (citing Appx21826 (138:2-17)). And the Board noted that Feig achieves that goal by disclosing “a technique for monitoring buffer fullness that . . . determines when ‘all the data’ for a buffer arrives.” Appx473 (citing Appx21684 (5:16-43, Fig. 4)). Further, by using two client buffers that each store respective segments, Feig avoids the risk of buffer overflow. Appx473.

The Board credited other motivations as well. It determined that using Feig’s streaming process in Carmel would expand the types of servers that could be used

with Carmel’s system to include non-streaming servers. Appx474; Appx20567 (¶120); Appx21682 (1:9-10). And that a skilled artisan would be motivated to use Feig’s teachings related to HTTP “with Carmel to quickly move data slices from the server to the clients to support playback with a minimum [number] of dropouts.” Appx475; Appx20580 (¶145).

As the Board determined that there were several motivations to combine Feig with Carmel, and substantial evidence supports them all, the Court should affirm the invalidity of the challenged claims based on the combination of Carmel and Feig. *Rai Strategic Holdings, Inc. v. Philip Morris Prods. S.A.*, 92 F.4th 1085, 1094 (Fed. Cir. 2024).

B. WAG’s Motivation-Based Challenges Fail.

WAG contends that “Amazon failed to provide a sufficient rationale to combine” Carmel and Feig for two reasons. OB59. First, it argues that Amazon provided only one rationale, and that no substantial evidence supports Amazon’s lone rationale. *Id.* Second, WAG argues that the Board erred by not adequately considering the difficulties of combining Feig with Carmel, and the Board’s finding to the contrary, again, is not supported by substantial evidence. OB59-62. Both arguments fail.

- 1. WAG is incorrect that Amazon provided only a single motivation to combine, or that only one rationale supports the Board's unpatentability determination.**

WAG argues that Amazon's *entire* rationale was limited to the following paragraph:

A POSITA would have been motivated to combine these teachings of Feig with Carmel because it would allow the client to precisely control and select which segments it receives from the server, which supports Carmel's goal of allowing a user to "decide and indicate at which slice of data stream 40 to begin downloading." EX1005 at 10:42-45. Such a combination is no more than using a known technique in Feig to improve a similar device or method in Carmel in the same way. EX1002, ¶ 158.

OB59 (citing Appx19945). WAG then argues the Court must reverse the Board as to the Carmel-Feig combination because, according to WAG, this rationale fails to demonstrate a motivation to combine. OB59-62. This argument is doubly flawed.

First, WAG fails to acknowledge the other motivations Amazon provided and the Board credited. As noted above, the Board determined that a skilled artisan would have been motivated to combine Carmel and Feig because it would allow the combined system "to operate without depending on the server maintaining a record of the last media data element sent" while also addressing any concern that Carmel's buffer might be overrun. Appx473 (relying on both experts' declarations, Feig, and Amazon's briefing below). Again citing Dr. Jeffay's testimony and Amazon's briefing, the Board also found that incorporating Feig into Carmel would permit Carmel to work with a non-streaming server, Appx474, and allow Carmel to move

data slices more quickly with fewer dropouts, Appx475. As explained above, substantial evidence supports each of these factual findings. And by not challenging them in its opening brief, WAG forfeited its right to challenge them on appeal. *Bozeman Fin. LLC*, 955 F.3d at 974.

Second, WAG implicitly argues that Amazon must provide an explicit motivation to combine each individual claim limitation even where other rationales would motivate a skilled artisan to combine the references. And because Amazon's petitions mentioned this rationale only when arguing limitation 1.k, if inadequate evidence supports it, then the Court must reverse the Board. But that is not what this Court's precedent requires.

Rather, "the law has always evaluated the motivation to combine elements based on the combination of prior art *references* that together disclose all of the elements of the invention." *Gen. Elec. Co. v. Raytheon Techs. Corp.*, 983 F.3d 1334, 1352 (Fed. Cir. 2020) (emphasis in original). Meaning that, once a challenger demonstrates that a skilled artisan would have been motivated to combine references, it is legal error for the Board to require "a motivation to combine each element of the claim." *Id.*; see also *Google LLC v. Sonos, Inc.*, No. 2023-1259, 2024 WL 2350509, at *3 (Fed. Cir. May 23, 2024) (rejecting similar argument that motivation must be proven on a claim-by-claim basis where "the proposed motivation logically applies to all of the claims at issue"). As described above, the

Board noted that Amazon did provide both general and specific motivations to combine Carmel and Feig, which the Board credited. Appx473-475. Because it was proper for the Board to rely on any sufficient motivation to combine *the references*—rather than just a single claim limitation—WAG’s argument fails. *Gen. Elec. Co.*, 983 F.3d at 1352.

2. Even the single motivation WAG challenges is supported by substantial evidence.

WAG’s argument also fails on the merits because substantial evidence supports the motivation it challenges. Here, WAG argues, as it did below, that Carmel “already allows a user to select a slice at which to *begin* downloading.” OB59 (emphasis in original); Appx471. And thus, WAG contends, this advantage from incorporating Feig is illusory, and the Board erred because it “failed to address the point that Carmel already did the same thing.” OB59.

But the Board addressed and rejected this contention. It credited Amazon’s argument that using Feig’s system with Carmel “complements Carmel’s goal of allowing a user to decide and indicate at which slice to *begin* downloading” (Appx473) by “allow[ing] for *better* client control of the data it receives from the server.” Appx476 (emphasis added). Feig’s disclosure provides the client-side implementation details not expressly disclosed by Carmel’s general reference to HTTP (albeit well-known to a skilled artisan), and further reduces the risk of the client’s buffer overflowing because the server will send only the segments the client

specifically requests. Appx20211 (citing Appx19942; Appx19945). WAG does not challenge on appeal the Board’s determination that using Feig’s system with Carmel would allow for better client control or the underlying evidence on which that finding was based. Nor does it distinguish the case law the Board cited that improving a device by making it “faster” or “more efficient”—i.e., better—can supply a proper motivation to combine. Appx476 (quoting *Dystar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1368 (Fed. Cir. 2006)).

3. WAG is incorrect that combining Carmel and Feig would change Carmel’s mode of operation.

Lastly, WAG argues that Amazon’s proposed modification of Carmel would require replacing Carmel’s “push” system for Feig’s “pull” system, resulting in a changed manner of operation of Carmel that the Board failed to address. OB59-62. This argument mischaracterizes both Amazon’s argument and the Board’s decision.

Amazon did not propose modifying Carmel from a “push” system into a “pull” system. Consistent with Carmel’s teachings, Amazon has always maintained that Carmel’s separate-file embodiment renders obvious a pull system—one in which the client requests data from the server. *E.g.*, Appx19929. Amazon relied on Feig not to turn Carmel from a “push” into a “pull,” but rather for Feig’s disclosure of details about the client individually requesting each data slice. Appx19927 (describing how in Feig’s system “the client computer makes a series of requests . . .”); Appx19930 (“Feig teaches that responsive to the requests from user systems . . . the server system

sends the media data elements with specified serial identifiers to the corresponding user systems.”). In other words, Feig discloses implementation details for a pull system that Carmel does not expressly disclose.¹⁷

Once that misunderstanding is corrected, WAG’s argument then boils down to whether there is substantial evidence supporting the Board’s determination that Carmel’s separate-file embodiment is not necessarily a push system. And as repeatedly described above, substantial evidence supports the Board’s determination that the clients in Carmel’s system request data from the server—i.e., that a skilled artisan would understand to implement Carmel as a pull system. *See Argument Section II, supra.*

CONCLUSION

The Court should affirm the Board’s FWDs in the Amazon IPRs.

¹⁷ As the Board found, Carmel does disclose using HTTP and, even independent of Feig, a skilled artisan would have known that the most common way to implement Carmel’s separate-file embodiment was using successive GET requests (a pull system). Appx461-464. And even if WAG’s argument that Carmel discloses only a push system was correct, a skilled artisan would be able to implement Feig’s pull system in Carmel because it is an easy substitution and both references use HTTP to send and request media data elements. Appx9348 (2:11-15); Appx20567-20568 (¶120); Appx20579 (¶¶143-144); Appx21683 (3:17-19).

Respectfully submitted,

November 4, 2024

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**CERTIFICATE OF COMPLIANCE WITH
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1. This brief complies with the type-volume limitation of Federal Circuit Rule 32(a). This brief contains 11,329 words, excluding the parts of the brief exempted by Federal Rule of Appellate Procedure 32(f) and Federal Circuit Rule 32(b).
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November 4, 2024

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CERTIFICATE OF SERVICE

I, the undersigned, hereby certify that on November 4, 2024, I caused the foregoing **RESPONSE BRIEF OF APPELLEES AMAZON.COM, INC., AMAZON WEB SERVICES, INC., AND AMAZON.COM SERVICES LLC** to be served on the following parties as indicated below:

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